CLAIMS

1. (Previously Presented) An inrush current controller for a device, comprising:

a connector for plugging the device into a source of energization, the connector including a first contact for connecting to a first power supply contact of the source, a second contact for connecting to a logic output from the source, and a third contact for connecting to a second power supply contact of the source;

an impedance having a current input that couples to the first contact of the connector, an impedance control input, and a current output coupling to the device; and

an impedance control circuit having a logic input coupling to the second contact of the connector, and having an impedance control output connected to the impedance control input, the impedance control output forcing the impedance OFF during a first time interval controlled by a first timer, and the logic output from the source enabling a limited inrush at the current input during a second time interval controlled by a second timer.

2. (Original) The inrush current controller of Claim 1 wherein the device comprises a data storage device and the source of energization comprises a host computer system.

3. (Original) The inrush current controller of Claim 1 wherein the impedance is continuously variable as a function of the control input.

4. (Previously Presented) The inrush current controller of Claim 1 wherein:

the first timer couples to the current input and the impedance control output, and provides a first timer output that forces the impedance OFF during the first time interval; and

an inrush current limit circuit coupled to the logic input and the impedance control output, and providing an inrush current limit output controlled by the second timer.

5. (Previously Presented) The inrush current controller of Claim 4 wherein the first timer output overrides the inrush current limit output to the impedance control output.

6. (Previously Presented) The inrush current controller of Claim 5 wherein the first timer output is an open circuit after the first time interval.

7. (Original) The inrush current controller of Claim 4 wherein the inrush current limit output gradually changes the impedance control output during a turn-on interval so that a device voltage has a slew rate that does not exceed than 12 volts per 100 milliseconds.

8. (Original) The inrush current controller of Claim 7 wherein the device has an impedance that is partially inductive.

9. (Previously Presented) The inrush current controller of Claim 4 wherein the first timer resets automatically when the connector is disconnected from the source of energization.

10. (Previously Presented) The inrush current controller of Claim 4 wherein the first timer is triggerable by voltage transients at the current input.

11. (Original) The inrush current controller of Claim 1 wherein the logic input triggers the limited inrush when the logic input is open circuit, and when the logic input is at a high level.

12. (Original) The inrush current controller of Claim 1 wherein the impedance comprises a transistor.

13. (Previously Presented) An inrush current controller for a device, comprising:

a connector for plugging the device into a source of energization, the connector including a first contact for connecting to a first power supply contact of the source, a second contact for connecting to a logic output from the source, and a third contact for connecting to a second power supply contact of the source, and an impedance having a current input that couples to the first contact of the connector, an impedance control input, and a current output coupling to the device; and

an impedance control circuit that forces the impedance OFF during a first time interval controlled by a first timer, and that enables a limited inrush at the current input during a second time interval that is controlled by the logic output from the source.

14. (Previously Presented) The inrush current controller of Claim 13 wherein the impedance control circuit further comprises a logic input that receives a logic input.

15. (Previously Presented) The inrush current controller of Claim 13 wherein the impedance control circuit further comprises an impedance control output coupling to the impedance control input for controlling the impedance.

16. (Original) The inrush current controller of Claim 13 wherein the device comprises a data storage device and the source of energization comprises a host computer system.

17. (Previously Presented) The inrush current controller of Claim 13 wherein the impedance control circuit further comprises:

a first timer that couples to the current input for providing a timer output that forces the impedance OFF during the first time interval; and

an inrush current limiter that provides an inrush current limit output enabling the limited inrush.

18. (Previously Presented) The inrush current controller of Claim 17 wherein the first timer means is triggerable by voltage transients at the current input.

19. (Previously Presented) A method of energizing a device, comprising:

providing a connector for plugging the device into a source of energization, the connector including a first contact for connecting to a first power supply contact of the source, a second contact for connecting to a logic output from the source, and a third contact for connecting to a second power supply contact of the source;

placing an impedance between a current input that couples to the first contact of the connector and a current output that couples to the device;

providing an impedance control output connected to an impedance control input, the impedance control output forcing the impedance OFF during a first time interval controlled by a first timer; and

providing an impedance control circuit with a logic input coupling to the logic output from the source at the second contact of the connector, the logic output enabling a limited inrush at the current input during a second time interval controlled by a second timer.

20. (Original) The method of Claim 19 further comprising: controlling a continuously variable impedance between the current input and the current output.

21. (Previously Presented) The method of Claim 19 further comprising:

coupling the first timer to the current input and the impedance control output;

providing a first timer output that forces the impedance OFF during the first time interval;

coupling an inrush current limit circuit to the logic input and the impedance control output, and

providing an inrush current limit output enabling the limited inrush.

22. (Previously Presented) The method of Claim 21 further comprising: overriding the inrush current limit output with the first timer output.

23. (Original) The method of Claim 21 further comprising: gradually changing the inrush current limit output during a turn-on interval so that a device voltage has a slew rate that does not exceed a preselected limit.

24. (Previously Presented) The method of Claim 21 further comprising: automatically resetting the first timer when the connector is disconnected from the source of energization.

25. (Previously Presented) The method of Claim 21 wherein the first timer is triggerable by voltage transients at the current input.